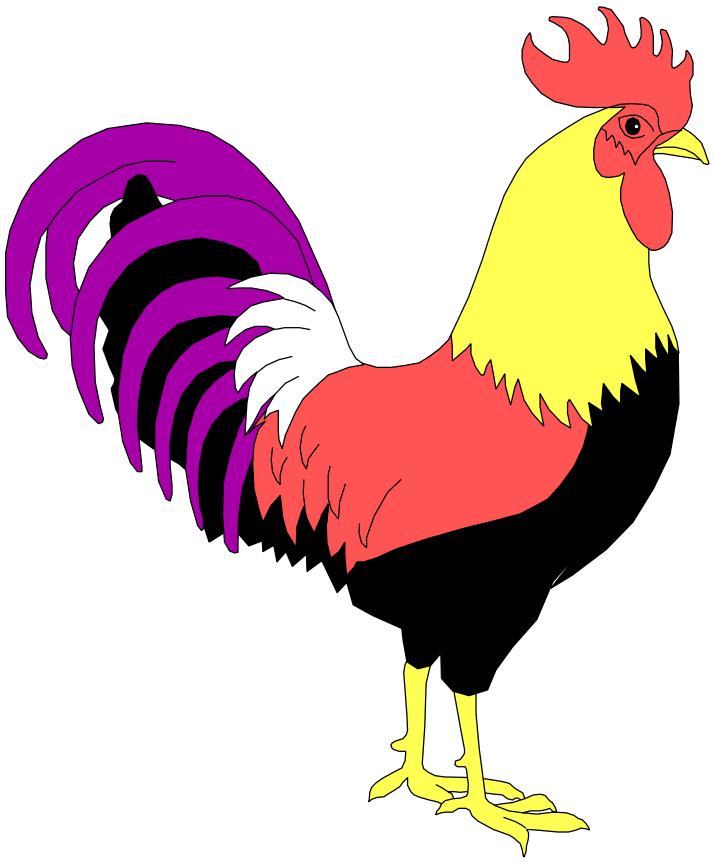

POULTRY POSTMORTEM INSPECTION

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OBJECTIVES

1. Identify the intent of Congress when poultry and poultry products are condemned because of disease.

2. Without the aid of reference:

   - List five (5) basic requirements plant management must meet in order to prepare carcasses in a uniform and consistent manner for postmortem inspection.

   - List eight (8) facility requirements plant management must provide at the postmortem inspection station.

   - List the categories on FSIS Form 6000-16 (lot tally sheet) and give the criteria applicable to each category for postmortem condemnation.

   - List seven (7) causes for liver condemnation.

   - List four (4) causes for kidney condemnation.

   - List the criteria needed for condemnation of a carcass part related to fractures and luxations.

   - List four (4) duties of the inspector's helper or trimmer required at the postmortem inspection station.

   - List five (5) factors that justify FSIS adjusting line speed.

   - List and describe three (3) methods to maintain positive control over condemned poultry product.

   - List four (4) methods for disposing of condemned poultry product.

   - List two (2) methods for disposing of poultry products condemned for biological residues.

3. Given copies of completed FSIS Form 6000-16's and a single lot, execute and indicate distribution of the following reports:

   Summary FSIS Form 6000-16

   FSIS Form 6000-21

   FSIS Form 9061-2

4. Given a description of postmortem findings of a carcass or its parts, describe the disposition of that carcass or part and use the regulations and/or manual to support that disposition.

5. List two (2) disposition actions a food inspector may take when a carcass is presented with no viscera.

INTRODUCTION

"It is the intent of Congress that when poultry and poultry products are condemned because of disease, the reason for condemnation … shall be supported by scientific fact, information, or criteria, and … condemnation under this act shall be achieved through uniform inspection standards and uniform applications…"

Those words were taken from a declaration of policy … section three of the Poultry Inspection Act. Condemnation must be on a scientific basis. Uniform inspection standards and dispositions are applied during the postmortem inspection of each carcass. Food inspectors, working under the supervision of a veterinarian, use approved methods for performing postmortem inspection.

The food inspector passes the wholesome, condemns the unwholesome, and retains the questionable carcasses for veterinary review. The veterinarian is responsible for making uniform dispositions on carcasses.

In this manner, the policy of the Congress to provide for the inspection of poultry and poultry products and otherwise regulate the processing and distribution of such articles is ensured.

The GS-5 has the authority to **pass the normal** and is allowed to **condemn the obviously unwholesome carcasses**. He or she usually works with an inspector of a higher grade to acquire a basic understanding of postmortem inspection as determined by the supervisor. The GS-5, generally, only gives instructions to the helper. The inspector remains at the GS-5 level or grade as a probationary employee for one year. After satisfactory completion of one year, the employee can be promoted to the grade of GS-7.

When inspectors reach Grade GS-7, they are considered to have acquired sufficient expertise to work as competent postmortem line inspectors. In the role of inspector, the GS-7 retains borderline or questionable carcasses for veterinary review and seeks advice and information about other duties he/she is called on to perform. They also have occasional verification (floor) duties including antemortem, operational sanitation, moisture control, and packing room procedures.

The GS-8 has the same postmortem responsibilities and authority as the GS-7 plus floor responsibilities. The GS-8 inspector is, generally, found when there are six or more line inspectors.

The GS-9 does the same things as the GS-7 and GS-8 inspector, except the GS-9 is usually assigned to a small plant as the only inspector and usually has a veterinary supervisor on patrol. The GS-9 still holds questionable carcasses for veterinary review.

Another type of FSIS personnel is the **while actually employed** , or WAE intermittent employee. A WAE is not entitled to all the benefits of a full-time government employee such as sick leave or annual leave. The WAE is usually called to work to cover scheduled leave or when an emergency occurs, and is basically assigned to postmortem inspection.

Still another type of FSIS employee involved with postmortem inspection is the cross-licensed USDA grader. Sometimes a grader who has been trained for postmortem inspection is used to cover a postmortem inspection position in emergencies or to help give breaks in isolated plants with one inspector who otherwise would not get a break.

PLANT MANAGEMENT RESPONSIBILITIES

This part of the module is divided into two parts. The first part discusses carcass preparation for postmortem inspection. The second part covers the facility requirements at the postmortem inspection station. Both of these areas involve plant management accepting responsibilities to allow carcasses to receive FSIS postmortem inspection.

Carcass preparation for postmortem inspection

The proper presentation of carcasses for postmortem inspection involves uniform and consistent feather removal, feet removal, opening of carcasses, evisceration, and shackling.

Feathers: The presence of feathers on carcasses at postmortem inspection is not significant. A carcass that has been scalded and passed through a picking machine will have sufficient feather removal for postmortem inspection. Inspectors should not direct carcasses to be hung back or the line speed to be reduced because of feathers.

Feet removal: Generally, the feet are removed at the hock joints. Washing the cut surface of hocks is not allowed until postmortem inspection is complete. Otherwise pathological exudate could be removed or obscured and prevent detection of synovitis. There are a limited number of exceptions in requiring proper feet removal.

Opening Cut: Plant management must minimize contaminating the opening cut of the carcass.

Evisceration and Shackling: Sanitation and consistency are important for a properly drawn carcass. Traditionally, viscera must be completely withdrawn, left suspended by natural attachments, and arranged consistently on the left or right side.

With increasing frequency poultry slaughter plants are using automatic equipment on the eviscerating line. Often, the equipment is complex and requires careful and regular adjustment for proper function. It is the responsibility of plant management to maintain the machinery so that it works properly.

The plant may use one of several methods available for suspending carcasses in the shackles. The plant may use a two-point or a three-point suspension depending on the facilities and local preference. Carcasses must be presented at the postmortem inspection station in a consistent manner.

The shackles must be identified on lines that have more than one inspector. They may be either color coded or mechanically separated (as in the case of selectmatic devices which "kick out" carcasses automatically).

Facilities requirements at the postmortem inspection station

Several types of facilities are needed at postmortem inspection stations so inspection duties can be conducted. Requirements vary slightly depending upon the method of inspection used at the plant. Presently, FSIS officially recognizes four poultry postmortem inspection methods: Traditional Inspection, Streamlined Inspection System (SIS), New Line Speed Inspection System (NELS), and New Turkey Inspection System (NTIS).

Plant management must provide the following facilities at the postmortem inspection station.

✍ Space:

The amount of space required for the inspector and helper varies, depending upon the inspection method. Regulations require a minimum of 4' x 2' for each. If enough space is not available for the inspector and helper, then the IIC, circuit supervisor, and plant management need to implement corrections. The recommended space for inspector and helper is not always adequate. Some plants need more.

✍ Lighting

Lighting requirements also vary between inspection methods.

Regulatory minimum lighting requirements at the postmortem station are:

Traditional Inspection……..50 footcandles
Streamlined Inspection System (SIS)…….200 footcandles
New Line Speed Inspection System (NELS)……..200 footcandles
New Turkey Inspection System (NTIS)…….200 footcandles

Other factors as important as the quantity of footcandles are the quality and direction of light. Light should not cause color changes on the inspected carcasses and should be shadow-free. Light with a minimum color-rendering index of 85 is mandatory with SIS, NTIS, and NELS.

✍ Hand-rinsing facilities

Water for handwashing with both hot and cold running water available, delivered through a suitable mixing device controlled by the inspector, or, alternatively, water at a minimum temperature of 65° F., must be available at the postmortem inspection station.

✍ Condemned containers

Generally there are two types of condemned containers at the postmortem inspection station. One type is for parts and one is for the whole carcass. These containers must be leak-proof and properly marked.

✍ Holder for FSIS form 6000-16

The plant uses this device to hold the lot tally sheet or FSIS Form 6000-16 so that it is conveniently located for the plant helper to record dispositions as instructed by the USDA postmortem inspector.

✍ Hangback racks

The primary purpose of the hangback rack is to retain questionable carcasses for veterinary review and disposition. The racks can also be used for carcasses designated as salvage, improper presentation, etc.

✍ Start/stop switch

A start/stop switch within easy reach of each inspector is required.

✍ Other facility requirements

The NELS, NTIS, and SIS inspection systems specify facilities in addition to those already mentioned. An adjustable platform is required at each inspection station. Reinspection stations must be provided at both the prechill and postchill locations.

CARCASS DISPOSITION

The postmortem inspector must make a decision about the wholesomeness of each carcass inspected. If the carcass is **wholesome**, it is allowed to continue down the line.

If the carcass is wholesome except for a **localized** disease condition, it is allowed to continue unrestricted after removal of the affected areas. The diseased portions that are removed become condemned material.

If the carcass is considered **unwholesome**, the entire carcass is condemned.

The final consideration for carcass disposition is **questionable carcasses** that require further examination. Borderline or questionable carcasses are placed on the hangback or retain rack pending further review. When the inspector is undecided about the proper disposition of a carcass, the helper is notified to place the carcass on the hangback or retain rack. The veterinarian reviews the carcass before making a final disposition.

The philosophy of carcass disposition is based on the interpretation of an interrupted disease process. Dispositions are made on carcasses based on the stage of disease development and the resolution of the disease or processes at the time of slaughter. If a disease process exists in the live animal, the pathogenesis of the disease stops at the time of slaughter, but the lesions of the disease will remain. Our responsibility is to evaluate and interpret the pathological lesions present after the animal is slaughtered and prepared for postmortem inspection. Consider the following factors.

? At the time of slaughter:

- ✍ Is there evidence that the disease process is being resolved?
- ✍ Has it developed into an irreversible stage?
- ✍ If it is being resolved, it will show evidence of healing (e.g., connective tissue walling off lesions, minimal evidence of inflammation, and a return to functional activity of the tissues).
- ✍ If there is systemic involvement, the carcass is unwholesome and shall be condemned.
- ✍ If only a part or a localized area of the carcass is affected, remove the affected portion and pass the remainder of the carcass as wholesome.

The Regulations specifically tell us what to do in the case of some disease conditions. The conditions are listed on FSIS Form 6000-16 (Lot Tally Sheet), and the criteria for condemnation in each category is as follows.

Tuberculosis

Avian tuberculosis is caused by the bacterium *Mycobacterium avium* and usually is a chronic, slowly developing disease. It has largely been eradicated in domestic poultry in the U.S. but is still found occasionally in mature birds.

Birds with TB develop a wasting condition characterized by loss of weight and diarrhea. At postmortem examination their carcasses are typically emaciated. Gray to yellow, firm nodules (tubercles) are often scattered along the intestines and may be found in various organs, especially the liver and spleen. Lungs generally have no gross lesions although, in advanced cases, any organ or tissue can be involved.

Avian tuberculosis can infect humans but is not considered to be a serious threat to people with healthy immune systems.

One definitive lesion is all that is required to condemn a poultry carcass for tuberculosis.

Leukosis

This category includes several neoplastic diseases caused by various viruses. All produce tumors in domestic poultry and present similar gross lesions.

The age and species of bird affected by leukotic tumors suggests which viral agent is involved. The most common manifestations of the leukosis complex are:

1) Marek's disease, which is an important disease only in young chickens less than six months of age
2) Lymphoid leukosis, which is most common in semi-mature and mature chickens
3) Reticuloendotheliosis, which occasionally produces liver and spleen tumors in turkeys and, rarely, runting disease in chickens
4) Lymphoproliferative disease, which affects turkeys, producing a greatly enlarged spleen as well as tumors in other organs.

There is no evidence that viruses of the leukosis complex are pathogenic for humans.

One definitive lesion justifies condemnation of the carcass. Definitive means a lesion that can be defended grossly as a lesion of leukosis.

Septicemia/toxemia

Septicemia is a disease state caused by pathogenic (disease producing) microorganisms in the blood that have produced systemic change within the bird. Systemic change affects the body as a whole rather than localized portions of it.

In septicemia the normal functions of the bird's organ systems are disrupted. The cells of the body deteriorate. This deterioration may be very rapid when highly virulent microorganisms are the cause, or it may be more gradual if less virulent ones are involved.

In some cases, the changes produced by septicemia overwhelm the bird and result in death. In other cases, the bird's immune system overcomes the causative organism before irreversible damage occurs and it recovers.

Septicemia is manifested by a group of clinical signs, not all of which will be present in a single carcass. Therefore, judgment plays an important part in correct dispositions for this condemnation category. Septicemic carcasses frequently have:

- ✍ petechial (pinpoint) hemorrhages on the heart, liver, kidneys, muscles, and serous membranes
- ✍ blood-tinged exudate in the body cavity
- ✍ swollen and hyperemic (contain an excess of blood) liver and spleen (remove most of the bacteria from the circulating blood)
- ✍ swollen and congested kidneys
- ✍ hyperemic skin
- ✍ muscle wasting (Some of this is caused by loss of appetite but most skeletal muscle breakdown is the result of changes in muscle metabolism that triggers protein degradation.)

Depending upon the cause and duration of septicemia, carcasses might be hyperemic, cyanotic, anemic, dehydrated, edematous, or exhibit a combination of these signs. No single carcass will show all of the signs.

Toxemia, poisoning caused by the absorption of toxins produced by infective organisms, shows signs similar to septicemia. Both conditions often exist simultaneously.

Septicemia/toxemia is commonly referred to as sep/tox. If a carcass shows systemic change, it is condemned.

Synovitis

Synovitis is caused by a number of organisms, most often members of the genus *Mycoplasma*. Injury and nutritional deficiencies also lead to synovitis. The result is acute or chronic inflammation of the membranes lining one or more joints and tendon sheaths.

Joints are often noticeably swollen and might contain varying amounts of exudate. The liver, kidneys, and spleen may be swollen, and the liver is sometimes stained green from bile stasis. Lesions vary depending upon whether or not the condition is confined to the joints or has overwhelmed the bird's defense mechanisms and caused systemic changes.

A carcass with synovitis is not condemned unless it also shows systemic or sep/tox changes.

Tumors

This category refers to tumors other than those of the leukosis complex. Some of the more common ones include squamous cell carcinomas, adenocarcinomas, leiomyomas, and fibromas.

- ✍ Squamous cell carcinomas are skin tumors found in young chickens. (See note on next page.)

- ✍ Adenocarcinomas generally are located on abdominal organs and are common in older birds.
- ✍ Leiomyomas are most often identified in the oviduct of fowl.
- ✍ Fibromas may develop in any connective tissue. They are more common in older birds.
- ✍ Numerous other types of tumors occur in domestic poultry but at a low frequency.

There is no evidence that any of these types of tumors are a health threat to humans.

Condemn a carcass for tumors if there is gross evidence of metastasis (more than one tumor indicating spread). The ***general rule*** is: one tumor - trim and pass; two or more tumors - condemn.

NOTE: The ***exception to the rule*** is for squamous cell carcinomas: Condemn young chickens showing generalized signs of avian keratoacanthoma (squamous cell carcinomas) with **large coalescing or large multiple dermal ulcers**. Trim all tumors and pass chickens with localized or only a few small squamous cell carcinomas.

? **Bruises**

If bruises cause systemic change in a carcass, the carcass is condemned and recorded under this category. If not, the bruises are trimmed and the remainder of the carcass is passed.

Cadaver

Poultry that die from causes other than slaughter are condemned under the cadaver category. These birds are not dead when they enter the scald vat. When submerged in the water, they drown.

Contamination

This category is for carcasses that are so contaminated they cannot be inspected. This includes carcasses:

- ✍ contaminated with bile or feces to the extent that the inspector cannot determine whether the carcass is wholesome
- ✍ that fall into open sewers or evisceration troughs

Overscald

Carcasses that are cooked are condemned. Many times these carcasses will also be mutilated by picking machines.

Airsacculitis

Numerous microorganisms cause airsacculitis, inflammation of air sacs. Often more than one infectious agent is identified in an outbreak. Members of the genus *Mycoplasma* are frequently involved. Birds are more susceptible to infections of the air sacs when they are under stress. Vaccination, other disease, poor nutrition, insanitary conditions, and poor ventilation are contributing factors.

The lesions of airsacculitis can be acute or chronic. Their appearance ranges from slight clouding of air sac membranes and small amounts of watery exudate to thickened, opaque membranes and large amounts of thick, white-to-cream colored and/or cheesy exudates. The exudates can be confined to the air sacs and their diverticuli, or they may be found in other areas if the air sac membranes are ruptured.

Pneumonia, pericarditis, and perihepatitis might be present. In some cases all portions of the respiratory tract (nasal passages, sinuses, trachea, bronchi, lungs, and air sacs and their diverticuli) are affected. In other cases little involvement beyond the air sacs is evident. Systemic change can occur.

One organism that causes airsacculitis in birds, *Chlamydia psittaci*, also can cause disease in humans. Outbreaks of this disease are sporadic and generally occur in turkeys rather than chickens. The turkey industry watches closely for any evidence of chlamydiosis, so infected flocks are usually identified and treated before slaughter. However, VMO's must stay alert for any poultry that show signs suspicious for this disease.

Carcasses are condemned if airsacculitis is extensive or prevents evaluation of the wholesomeness of the carcass. If the exudate cannot be effectively removed, the carcass is condemned. Carcasses are also condemned if airsacculitis occurs in conjunction with systemic change.

Other

Several subgroups are recorded in this category.

- Inflammatory Process (IP) - When the condition is generalized condemn the carcass.
- Plant rejects - When the plant rejects a carcass before inspection, condemn as plant reject.
- Carcasses condemned because there are no viscera to inspect - Disposition of no-viscera carcasses are determined by the veterinarian in charge and are based upon flock incidence of disease.
- Xanthomatosis - If the condition is generalized condemn the carcass.
- Parasites – If the infestation is generalized condemn the carcass.

Veterinary supervisors may check the accuracy of inspector dispositions by observing birds upstream or downstream from the inspector or by checking birds and parts in the condemn barrel.

PARTS DISPOSITION

Only condemnation of carcass parts is required for some localized conditions. If there is an unwholesome portion or part that can be effectively removed, the remainder of the carcass is considered wholesome. Some organs or parts that may be condemned because of localized conditions without condemning the whole carcass are:

? **Livers**

Condemn livers with:

- ✍ fatty degeneration
- ✍ extensive petechiae
- ✍ inflammation
- ✍ an abscess
- ✍ a necrotic area
- ✍ necrosis
- ✍ cirrhosis
- ✍ a single non-leukotic tumor
- ✍ cysts
- ✍ discoloration due to a biliary system disorder or postmortem changes
- ✍ contamination from intestinal content or noxious materials

? **Kidneys**

Condemn kidneys when:

- ✍ the carcass has renal or splenic pathology or hepatic lesions that cause liver condemnation
- ✍ there are pathological conditions requiring condemnation of all viscera
- ✍ there is airsacculitis (vacuum the kidneys from carcass or salvaged posterior portion)

? **Fractures**

A fracture with no associated hemorrhage is passed. A fracture with hemorrhage in the affected part is trimmed and the remainder of the carcass is passed. A compound fracture, one in which the bone goes through skin, is trimmed whether or not there is hemorrhage present.

? **Luxations**

Luxation is a simple disjointment without breaking the skin and without hemorrhage. It does not have to be trimmed. If hemorrhage does not extend into the musculature, trim or slit/wash out the hemorrhage. Do not trim simple redness of skin.

INSPECTOR'S HELPER

One properly trained plant employee, called the inspector's helper, should be designated for each postmortem inspector. The helper's job is to:

1. Remove condemned birds or parts from the line and place them in the designated U.S. condemn containers.

2. Remove retained carcasses from the line and place them in the appropriate area of the retain rack, designated for veterinary review.

3. Remove carcasses designated for approved offline salvage and place them in the appropriate area of the retain rack.

4. Record condemned carcasses in the appropriate blocks of the inspector's lot sheet (FSIS Form 6000-16) as directed by the inspector.

5. Mark carcasses, at the inspector's direction, for trim or salvage.

6. Trim off abnormalities.

7. Assist as much as possible to allow the inspector to devote full attention to postmortem inspection.

The inspector and the helper must work as a team. The inspector may give verbal instructions or use hand signals to direct the helper.

CONDEMNED PRODUCT

FSIS inspectors must maintain positive control over condemned poultry product. There are three methods to do this.

? Under direct supervision of an FSIS inspector
? Under government lock or seal
? By denaturing the product

Condemned poultry products may be disposed of by one of the following methods.

? Steam
? Burying
? Burning
? Chemical denaturing
? Dye denaturing

Only burying and burning may be used for products condemned for biological residues.

LINE SPEEDS

FSIS may adjust line speed for the following reasons.

? poultry class and the size of the birds in the class

? presentation errors, such as viscera on the wrong side or not presented in a consistent manner

? disease incidence

? plant personnel's inability to accomplish eviscerating procedures sanitarily with a minimum of contamination

? physical limitations of inspectors

? plant facilities

FSIS does not require line speed adjustments for excessive feathers on carcasses at postmortem inspection.

Maximum line speeds established by FSIS are permitted on the eviscerating line **when optimum conditions exist**. When there are less than optimum conditions, line speed adjustment is required. The IIC is responsible for directing plant management to reduce the line speed to permit adequate inspection and ensure a smooth flow of product.

When the IIC is satisfied that the situation that necessitated the line speed reduction has been corrected, he or she will permit increase in the line speed.

SALVAGE OF CARCASSES AWAY FROM THE POSTMORTEM INSPECTION STATION

The establishment must have a written procedure for each type of salvage. The procedures must be done under sanitary conditions, with adequate facilities, and personnel must be available. There should be a continuous product flow without pileup or delay.

Facilities at salvage stations should include:

? adequate space located in the eviscerating area
? a retain rack designed to prevent cross-contamination
? a trough or table sloped and properly drained
? a singer, if there is not one in the picking room
? containers for chilling the product
? a spray nozzle with proper fittings to clean carcasses
? a facility for washing hands, tools, etc., such as a gooseneck
? a minimum of 50 footcandles of light at contamination salvage

Contamination Knife Salvage

When a carcass is designated for knife salvage because of body cavity contamination, most plants follow a salvage technique similar to the following:

? remove the viscera
? hang the carcass by the neck in a designated area on the retain rack
? transfer the carcass to the salvage station and rehang it by the neck
? wash external carcass surfaces thoroughly before any cutting
? properly trim the carcass without cutting into the body cavity or opening cut surfaces
? usually save both wings, both legs, and the breast muscle, including the deep and superficial pectoral muscles

With the advent of HACCP, plants do not have to get prior approval for contamination knife salvage procedures. You might see variation in the salvage techniques used, however, all knife salvage must be done in a sanitary manner and must not produce contaminated or adulterated product.

Airsacculitis Salvage

Special attention must be given to salvaging carcasses with airsacculitis because of the complexity of the interclavicular air sac and the associated diverticuli. If the visible part of the interclavicular air sac is inflamed, assume all of it is inflamed and salvage the carcass accordingly.

When a carcass is designated for knife salvage because of airsacculitis, most plants follow a salvage technique similar to the following:

? The salvaged carcass with airsacculitis is usually hung by the legs to distinguish it from a salvageable contaminated carcass.
? Other steps, such as removing the viscera, transferring the carcass to the salvage station, etc. are also followed for carcasses with airsacculitis.
? The following portions of the carcasses are usually salvageable: the wings (minus the portion containing the humeral bones), the legs, and the breast muscle. The area of the breast muscle, that area around the first wing joint is condemned and the deep pectoral muscle anterior to breastbone bursa is condemned. All the rest is eligible for salvage.

With the advent of HACCP, plants do not have to get prior approval for airsacculitis knife salvage procedures. You might see variation in the techniques used, however, all knife salvage must be done in a sanitary manner and must not produce contaminated or adulterated product.

REPROCESSING OF CARCASSES AWAY FROM THE POSTMORTEM INSPECTION STATION

Contamination Reprocessing

Carcasses that have their body cavities contaminated with digestive tract contents may be rendered unadulterated by prompt washing, trimming, and/or vacuuming instead of knife salvage. The procedure for removing digestive tract content is called reprocessing. Reprocessing is still a procedure that requires FSIS approval. There must be adequate facilities, trained personnel, and the procedure must be accomplished sanitarily without pileup or delay.

Facilities required at the reprocessing station are:

? adequate space in the eviscerating room or a suitable adjacent area
? a retain rack designed to prevent cross-contamination
? a trough or table that is sloped and properly drained
? containers for chilling product
? a knife rack or stand
? conveniently located hand-washing facilities
? at least 50 footcandles of light
? a spray nozzle with proper fitting for cleaning carcasses
? water containing 20 ppm available chlorine for rinsing all reprocessed carcasses

When a carcass is designated for reprocessing because of body-cavity contamination, the plant is required to:

- ? remove the viscera and hang the carcass in a designated area on the retain rack
- ? transfer the carcass to the reprocessing station and suspend it to prevent contamination during reprocessing
- ? remove the crop
- ? wash the external surface thoroughly
- ? remove contaminants by trimming, vacuuming, and/or washing. Any contamination of cut surfaces must be removed by trimming
- ? thoroughly rinse with water containing at least 20 ppm available chlorine
- ? measure and record the chlorine concentration at least once a day
- ? monitor reprocessed birds
- ? make birds available for reinspection by the FSIS inspector

If retain racks at the USDA inspection station or reprocessing station are filled, the inspector in charge (IIC) should allow the plants the option of disposing of contaminated carcasses or adjusting the production rate. Carcasses disposed of by the plant because of reprocessing pileups should be recorded as plant rejects.

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WORKSHOP

Fill in the blanks.

Official references needed to accurately complete the worksheet statements are listed. The following abbreviations will be used to indicate reference:

PPIA: Poultry Products Inspection Act as amended.

Reg.: Poultry Products Inspection regulations, Part 381

FSIS DIR: FSIS Directive 6210.1, Rev 1.

Reg. 381.76(a)

A post-mortem inspection shall be made on a bird-by-bird basis on all poultry eviscerated in an official establishment. No viscera or any _____ thereof shall be_____ from any poultry in any official establishment, except at the time of postmortem inspection, unless their _____ with the rest of the carcass is maintained in a manner satisfactory to the inspector until such inspection is made. Each carcass to be eviscerated shall be _____ so as to expose the organs and the body cavity for proper examination by the inspector and shall be prepared _____ after inspection as ready-to-cook poultry.

Reg. 381.36(c)

Facilities for the Steamlined Inspection System (SIS). The following requirements for lines operating under SIS are in addition to the normal requirements to obtain a grant of inspection. The requirements for SIS in § 381.76(b) also apply.

(1) The following provisions shall apply to every inspection station:

(i) The conveyor line shall be _____ for the entire length of the inspection station. The vertical distance from the _____ of the shackles to the top of the adjustable platform (paragraph(c)(1)(iv) of this section) in its _____ position shall not be less than 60 inches.

(iii) Selectors or _____ shall be installed in establishments with two inspection stations on a line so each inspector will receive birds on 12-inch centers with no _____ birds to impede inspector. The selector must move the bird to the edge of the trough for the inspector and establishment helper. The selectors must be _____, steady, and _____ in moving the birds parallel and through the

inspection station. Birds shall be selected and released smoothly to avoid _____ when entering the inspection station.

(iv) Each inspector's station shall meet the requirements specified in § 381.53. The station shall have a platform that is _____ and can be safely accessed by the inspector. The platform shall be designed so that it can be easily and rapidly adjusted for a minimum of _____ inches vertically while standing on the platform. The platform shall be a minimum length of 4 feet and have a minimum width of 2 feet; the platform shall be designed with a 42-inch high rail on the back side and with _____ foot bumpers on both sides and front to allow safe working conditions. The platform must have a safe lift mechanism and be _____ enough for the inspector to sit on a stool and to change stations during breaks or station rotation.

(x)(2) The following provisions shall apply only to prechill and postchill _____ stations:

(x)(2)(i) Floor space shall consist of a _____ of 3 feet along each conveyor line and after each chiller to allow carcasses to be removed for evaluation. The space shall be level and protected from all traffic and overhead obstructions.

FSIS Dir. 6210.1, Rev. 1

VI. CATEGORIZING CARCASSES MISSING ALL OR PART OF THE VISCERA

A. Carcasses are to be classified as having "no viscera" if:

1. No _____ parts are present; or

2. Some visceral parts are present, but all _____ "major organs" (heart, liver, _____) are missing.

B. Carcasses are to be classified as "missing part of the viscera" if some visceral parts are present, including at least one _____ organ.

NOTE: For purposes of this classification, _____ or more of the _____ will be considered the same as a whole liver.

VIII. POST-MORTEM DISPOSITION

D. The inspector's helper may assist the inspector in _____ inspection by:

1. _____ carcasses from the line;

2. Marking the FSIS Form 6000-16;

3. Identifying carcasses; and

4. Trimming defects and abnormalities (_____ time permits as specified in _____ inspection systems).

PPIA Section 4(g)

The term "_____" shall apply to any poultry product under one or more of the following circumstances:

Trainee: Read(1) and (2).

(3) If it consists in whole or in part of any _____ , putrid, or decomposed substance or is for any other reason unsound, unhealthful, _____, or otherwise unfit for human food;

(4) If it has been prepared, packed, or held under insanitary _____ whereby it may have become contaminated with filth, or whereby it may have been rendered injurious to health;

(5) If it is, in whole or in part, the product of any poultry which has died otherwise than by _____;

(6) If its _____ is composed, in whole or in part, of any poisonous or deleterious substance which may render the contents injurious to health;

Read (7) and (8).

Reg. 381.77

Each carcass, including all parts thereof, in which there is any lesion of disease, or other condition which might render such carcass or any part thereof _____ and with respect to which a final decision cannot be made on first examination by the inspector, shall be held for further examination. The identity of each such carcass, including all parts thereof, shall be maintained until a _____ examination has been completed.

Reg. 381.78(a)

At the time of any inspection under this subpart each carcass, or any part thereof, which is found to

be adulterated shall be _____, except that any such articles which may be made _____ adulterated by reprocessing, need not be so condemned if so reprocessed under the supervision of an inspector and thereafter found to be not adulterated.

Reg. 381.79

Passing of Carcasses and Parts.

Each carcass and all organs and other parts of carcasses which are found to be not adulterated shall be _____ for human food.

Reg. 381.80

General;

The carcasses or parts of carcasses of all poultry _____ at an official establishment and found at the time of postmortem inspection, or at any subsequent inspection, to be affected with any of the diseases or conditions named in other sections in this subpart shall be _____ of in accordance with the section pertaining to the disease or condition. Owing to the fact that it is _____ to formulate rules for each specific disease or condition and to designate at just what stage a disease process results in an adulterated article, the decision as to the disposal of all carcasses, organs or other parts not specifically covered by the regulations, or by instructions of the Administrator issued pursuant thereto, shall be left to the _____, and if the inspector in charge is in doubt concerning the disposition to be made, specimens from such carcasses shall be forwarded to the Inspection Service _____ for diagnosis.

FSIS Dir. 6210.1

VIII. POSTMORTEM DISPOSITION

A. A veterinary inspector-in-charge is _____ for disposition accuracy. Under close veterinary supervision, inspectors may _____ poultry carcasses, parts, or organs obviously _____ or unfit for human food. Any carcass showing signs of an abnormal physiological state but not obviously condemnable _____ for the veterinary medical officer, who shall make a judgment on the disposition as required by regulations.

B. Condemnations are to be recorded on FSIS Form 6000-16, Poultry Inspection Lot Tally Sheet.

C. The disposition guidelines area as follows:

1. For a carcass(es) classified as "missing part of the viscera", the inspector shall:

a. pass the carcass(es) as wholesome;

b. _____ the questionable carcass(es) and/or _____ for veterinary disposition; or

c. _____ the carcass(es) per disease condition.

2. For carcass(es) classified as having _____, the inspector shall hang back the carcass(es) for veterinary _____ until the IIC can:

a. determine if the entire _____ of "no viscera" carcass(es) should be retained due to the existence of pathological/_____ conditions; or

b. direct the on-line inspectors to pass carcasses in that lot, if pathological/ unwholesome conditions _____.

Reg. 381.91

Contamination.

Carcasses of poultry contaminated by volatile oils, paints, poisons, gases, _____ water in the air sac system, or other substance which render the carcasses _____ shall be condemned. Any organ or other part of a carcass which has been accidentally _____ in the course of processing shall be condemned, and if the whole carcass is affected, the whole carcass shall be condemned.

Reg. 381.92

Overscald.

Carcasses of poultry which have been overscalded, resulting in a _____ appearance of the flesh, shall be condemned.

Reg. 381.81

Tuberculosis.

Carcasses of _____ with tuberculosis shall be condemned.

Reg. 381.83

Septicemia or toxemia.

Carcasses of poultry showing evidence of any septicemic or toxemic disease, or showing evidence of an _____ physiologic state, shall be condemned.

Reg. 381.86

Inflammatory Processes.

Any organ or other part of a carcass which is affected by an inflammatory process shall be condemned and, if there is evidence of general _____ disturbance, the whole carcass shall be condemned.

Reg. 381.87

Tumors.

Any organ or part of a carcass which is affected by a tumor shall be condemned and when there is evidence of _____ or that the general condition of the birds has been affected by the size, position, or nature of the tumor, the whole _____ shall be condemned.

Reg. 381.89

Bruises.

Any _____ of a carcass which is badly bruised shall be condemned and, if the whole carcass is _____ as a result of the bruise, the whole carcass shall be condemned. Parts of a carcass which show only slight reddening from a bruise may be _____ for food.

Reg. 381.90

Cadaver.

Carcasses of poultry showing evidence of having died from _____ other than _____ shall be _____.

Reg. 381.84

Airsacculitis.

Carcasses of poultry with evidence of _____ involvement of the air sacs with airsacculitis or those showing airsacculitis along with _____ changes shall be condemned. Less affected carcasses may be passed for food after _____ removal and condemnation of all affected tissues including the _____.

Reg. 381.93

Decomposition.

Read 381.93 in your Regulations.

Answer the following questions.

1. Identify the intent of Congress when poultry and poultry products are condemned because of disease.

2. List basic requirements plant management must meet in order to prepare carcasses in a uniform and consistent manner for postmortem inspection.

3. List facility requirements plant management must provide at the postmortem inspection station.

4. List the condemnation categories on FSIS Form 6000-16 (lot tally sheet) and give the criteria applicable to each category for postmortem condemnation.

5. List nine causes for liver condemnation.

6. List the criteria needed for condemnation of a carcass part related to fractures and luxations.

7. List the duties of the inspector's helper required at the postmortem inspection station.

8. List seven factors that justify FSIS adjusting line speed.

9. List three methods to maintain positive control over condemned poultry product.

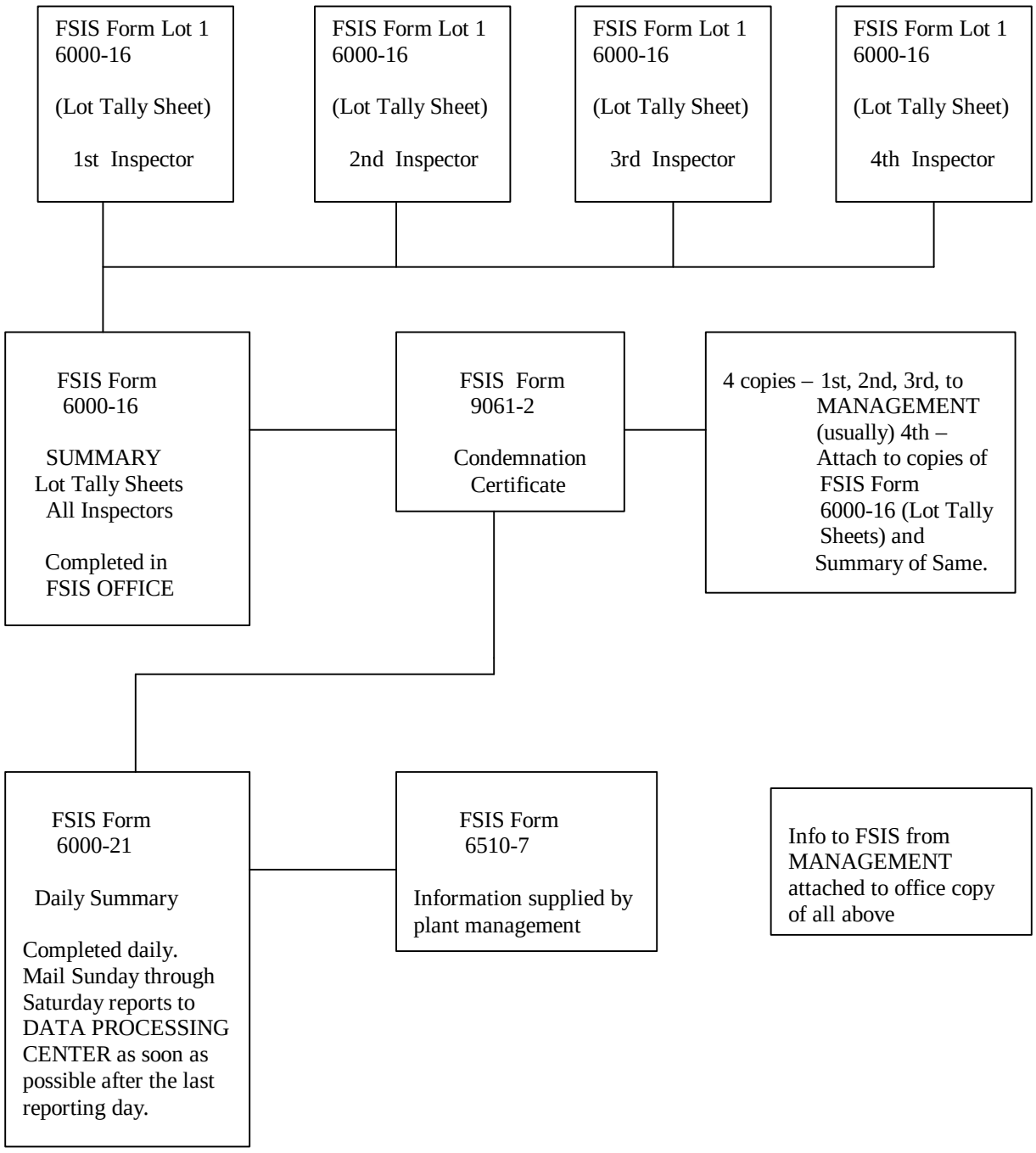
10. List five methods for disposing of condemned poultry product.

11. List two methods for disposing of poultry products condemned for biological residues.

12. List the disposition actions a food inspector might be instructed to take by the VMO when a carcass is presented with no viscera.

FLOW CHART FOR POSTMORTEM REPORTS

Example for a Plant with 4 line Inspectors



Read the scenario, look at the workshop forms, and fill in the blanks.

Four food inspectors have submitted their FSIS Form 6000-16's, Lot Tally Sheets, for one lot of poultry. The plant management has submitted to you the FSIS Form 6510-7. Poultry Lot Information, for the same lot. Use the forms on the next few pages of this supplement to:

1. Prepare a summary FSIS Form 6000-16 for the lot.

2. Prepare an FSIS Form 9061-2 for the lot.

3. Prepare an FSIS Form 6000-21 (Daily Summary).

4. In the space below, indicate the distribution and/or filing location of the following forms. (See the chart on the previous page.)

FSIS Form 6000-16 _____

_____.

FSIS Form 9061-2 _____

_____

_____

FSIS Form 6510-7_____

_____

FSIS Form 6000-21_____

_____

_____

U.S. DEPARTMENT OF AGRICULTURE FOOD SAFETY AND INSPECTION SERVICE **POULTRY LOT INFORMATION** (FROM RECORDS OF OFFICIAL ESTABLISHMENT)	The response to this information request is voluntary. The information is needed to make daily reports of the amount and disposition of Poultry Products processed or handled. FSIS uses the information to complete percentages of condemnations, workload assignments and Market News Reporting. (9 CFR 381.180)	DATE PROCESSED ***9/9/00***

DAY'S RUN	LOT NO(S).
✍	***1***

CLASS	NO. HEAD IN LOT
YOUNG CHICKENS	***15,000***

CERTIFIED CHILLED *(RTC weight)*	CERTIFIED FROZEN (*RTC weight)*	LIVE WEIGHT
29,290 lbs.	----------	***45,000 lbs.***

DEAD ON ARRIVAL		**POSTMORTEM CONDEMNED WEIGHT**	
NO. HEAD	WEIGHT	CARCASSES	PARTS
33	***100 lbs.***	***360 lbs.***	***160 lbs.***

PLANT NO.	SIGNATURE OF AUTHORIZED PLANT OFFICIAL
P-42	*Frank Furter*

FSIS FORM 6510-7 (9/87) REPLACES MP FORM 514-2, WHICH MAY BE USED UNTIL EXHAUSTED.

Postmortem Conditions Slides (904C/X)

Slide 1. Tuberculosis (TB) in liver – Characteristics of the circled lesions are: irregular border, coalescing of smaller lesions, heterogeneous appearance; lesions are usually seen in mature classes, rare in young chickens.

Slide 2. TB – liver, spleen, lung, and intestine, general pattern of spread.

Slide 3. TB – lesions in intestine, liver and spleen; notice the absence of fat tissue around gizzard.

Slide 4. TB – spleen; crushing of spleen may be required in mature classes of poultry.

Slide 5. TB – fowl spleen.

Slide 6. Leukosis – skin, young chicken; feather follicles, affected areas circled.

Slide 7. Leukosis – skin; young chicken drumstick.

Slide 8. Leukosis – close up of previous slide.

Slide 9. Leukosis – skin of drumstick – feather follicles; characteristics of skin leukosis as seen on this side; enlarged feather follicles, loss of normal pattern, loss of normal morphology, coalescing of follicles as they are affected with neoplastic tissue.

Slide 10. Leukosis – skin; traumatized.

Slide 11. Leukosis – liver; lesions within circle: characteristics of pearl color, homogeneous appearance.

Slide 12. Leukosis – liver; multiple lesions.

Slide 13. Leukosis – sex organs (testicles); larger testicle is grossly affected.

Slide 14. Leukosis – sex organ (ovary); grossly enlarged.

Slide 15. Leukosis – sex organ (ovary); chalk-like appearance, grossly enlarged.

Slide 16. Leukosis – bone; normal bone in center; top and bottom bones are enlarged in the shaft portion as compared to the narrow middle bone.

Slide 17. Leukosis – bone, cross section of the tibia on the left has a marked enlarged cortex, has broken smoothly, and contains pale marrow. Normal bone on right has broken with a rough, jagged surface.

Slide 18. Leukosis – liver; big liver disease. Liver on the left is affected with a proliferative, diffuse type of leukosis; normal liver on right.

Slide 19. Sep/tox – heart and liver from a sep/tox carcass as compared with a heart and liver from a normal carcass.

Slide 20. Sep/tox – liver with multiple hemorrhages and a leukotic tumor in circle.

Slide 21. Sep/tox – carcass with viscera exposed; note the dark-colored, depleted fat covering on the viscera; obvious carcass changes include loss of subcutaneous fat, cyanosis, dehydration, visceral hyperemia.

Slide 22. Sep/tox – carcass on the left shows hyperemia, cyanosis, and dehydration as compared to the normal carcass on the right.

Slide 23. Synovitis – enlarged hock joints of bird on the right. Compare to normal hock joints of bird on the left.

Slide 24. Synovitis – hock joint exposed; inflammation.

Slide 25. Synovitis – hock joint; exudate present.

Slide 26. Synovitis – affected hock on left as compared to normal hock on right.

Slide 27. Tumors – multiple tumors; ovarian adenocarcinoma.

Slide 28. Tumors – metastatic; multiple tumors on intestines and mesentery.

Slide 29. Tumors – breast area.

Slide 30. Tumors – skin; multiple squamous cell carcinomas.

Slide 31. Tumors – skin squamous cell carcinoma; lesion circled.

Slide 32. Bruise – localized; trim.

Slide 33. Bruise – could be trimmed.

Slide 34. Bruises – three carcasses: carcass on left, local; middle carcass, normal; carcass on right, bruises of systemic nature.

Slide 35. Cadavers – carcass on right, normal; compare to carcass on left, which is a cadaver. Notice the color of skin and condition of the viscera.

Slide 36. Overscald – normal carcass on left as compared to overscald carcass on right, which has a cooked appearance. The skin slips easily and the breast muscle has a cooked appearance.

Slide 37. Overscald – viscera from normal carcass on left as compared to viscera from overscald carcass on right. Notice the pale appearance of the overscalded liver and viscera.

Slide 38. Air sac – normal interclavicular, close up.

Slide 39. Air sac – pointers in normal thoracic air sacs, close up.

Slide 40. Air sac – interclavicular – thoracic:

A. Pointing to interclavicular air sac at the junction of where fat is deposited and where there is no fat on the interclavicular air sac membrane.

I. Points to clear portion or "window" of interclavicular air sac membrane.

Large dotted circle – visible outline of interclavicular air sac.

Little dotted circle – left thoracic air sac.

II. Points to the normal appearance of the air sac membrane.

Slide 41. Airsacculitis:

Top arrow: affected interclavicular air sac with exudate.

Bottom arrow: affected thoracic air sac; exudate throughout the membrane.

Slide 42. Airsacculitis – interclavicular and thoracic both affected. Notice the thickening and presence of exudate in the membrane.

Slide 43. Airsacculitis:

A. Abdominal air sac affected; exudate and thickening of membrane visible.

I. Exudate visible on other viscera.

Slide 44. Airsacculitis – left abdominal air sac; left kidney inside dotted lines.

Slide 45. Airsacculitis – abdominal; caseous exudate visible within body cavity.

Slide 46. Airsacculitis – abdominal; exudate characteristic of a fungal infection.

Slide 47. Salpingitis – inflammation of the oviduct; lesions inside dotted circle.

Slide 48. Salpingitis – cross section of oviduct containing exudate.

Slide 49. Inflammatory process; knee joint puffed up.

Slide 50. Inflammatory process – leg incised; arrow points to exudate.

Slide 51. Inflammatory process – exudate in posterior abdominal area.

Slide 52. Xanthomatosis – skin condition, cause unknown.

Slide 53. Xanthomatosis – extensive skin involvement.

Slide 54. Xanthomatosis – carcass incised.

Slide 55. Parasites – subcutaneous mite. Arrow points to nodules, which are the result of parasites.

Slide 56. Parasites – subcutaneous mites. Lesions are the result of mite on tissue under the skin.